

# ***NRL role in Coastal Storms Initiative (CSI)***

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(slides created November 2003)

## ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

**<http://www.csc.noaa.gov/csi/>**

**“The Coastal Storms Initiative (CSI) is a nationwide effort led by the National Oceanic and Atmospheric Administration (NOAA) to lessen the impacts to coastal communities from storms. To accomplish this goal, local, state, and federal organizations are working together to develop a large suite of new and improved tools, data, information, forecast models, and training for coastal communities. This effort will help coastal communities plan for, respond to, and recover from coastal storms.”**

## ***Coastal Storms Initiative (CSI)***

- **Sponsor: NOAA (NRL's primary POC was Jeff Savadel, NOAA D.C.)**
- **Funding profile (wave modeling work) (NRL)**
  - **FY03: 10k**
  - **FY04: 60k (pending)**
  - **FY05: 30-80k**
  - **FY06: 30-80k**

# ***Coastal Storms Initiative (CSI)***

**Background on coastal region wave forecasting at NWS (pre-CSI):**

- None
- Regional WW3
- Nowcasts from buoys

## ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

**FY03 Accomplishment: forecasting systems created**

- **Two pilot forecasting systems running now**
  - **Northeast Florida (coordinated w/ Jacksonville office)**
  - **North California (coordinated w/ Eureka office)**
- **Wave model used: SWAN (Booij et al. 1999)**
- **Forecasts on ftp site**
  - **<ftp://ftp7300.nrlssc.navy.mil/pub/rogers/CSI/>**
- **Preliminary validation of both systems performed**  
**Oct 22 2003**
  - **<ftp://ftp7300.nrlssc.navy.mil/pub/rogers/CSI/validation/>**

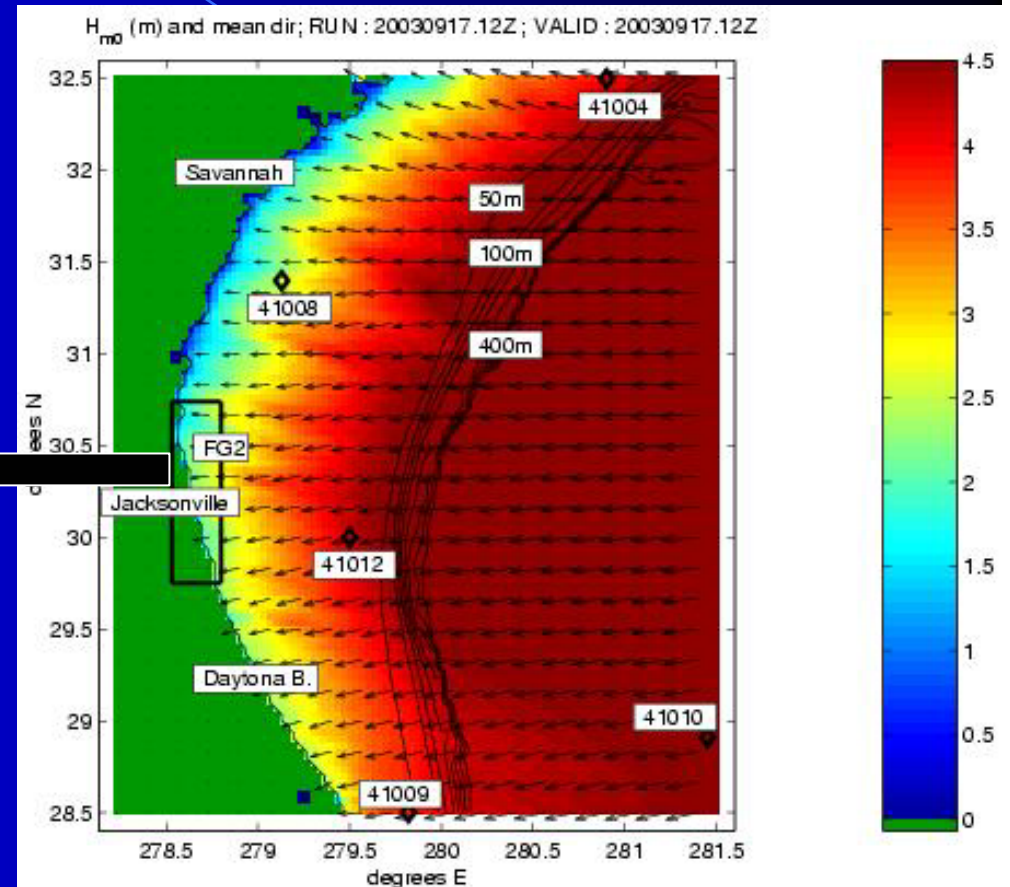
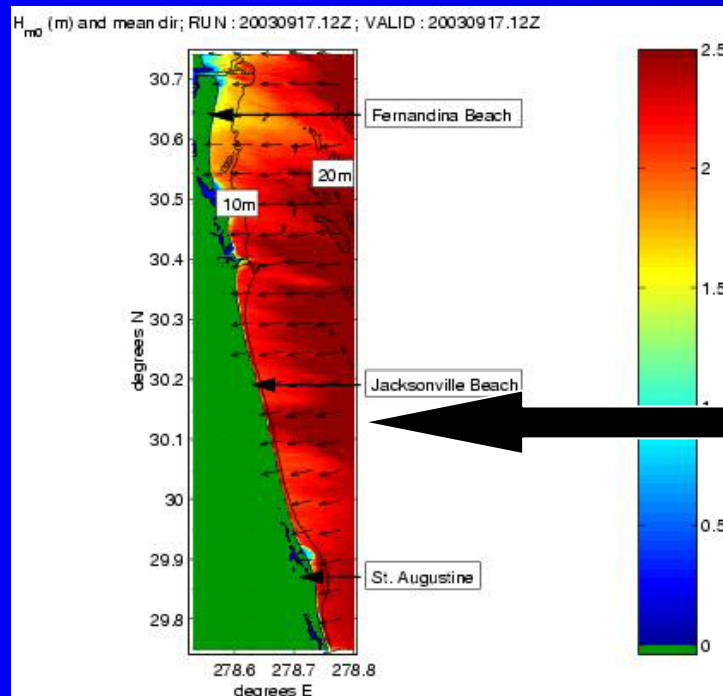
## ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

**Northeast Florida (coordinated w/ Jacksonville office)**

- **Running in realtime on NRL workstation since Aug. 29 2003**
- **Forced by winds from NWS global model**
- **Forced by wave spectra from NCEP WNA WW3**
- **Two SWAN grids**
- **Forecasts out to 4 days**

# ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

## ***Northeast Florida Forecast System***



Example forecast (analysis): Sept 17 1200Z 2003

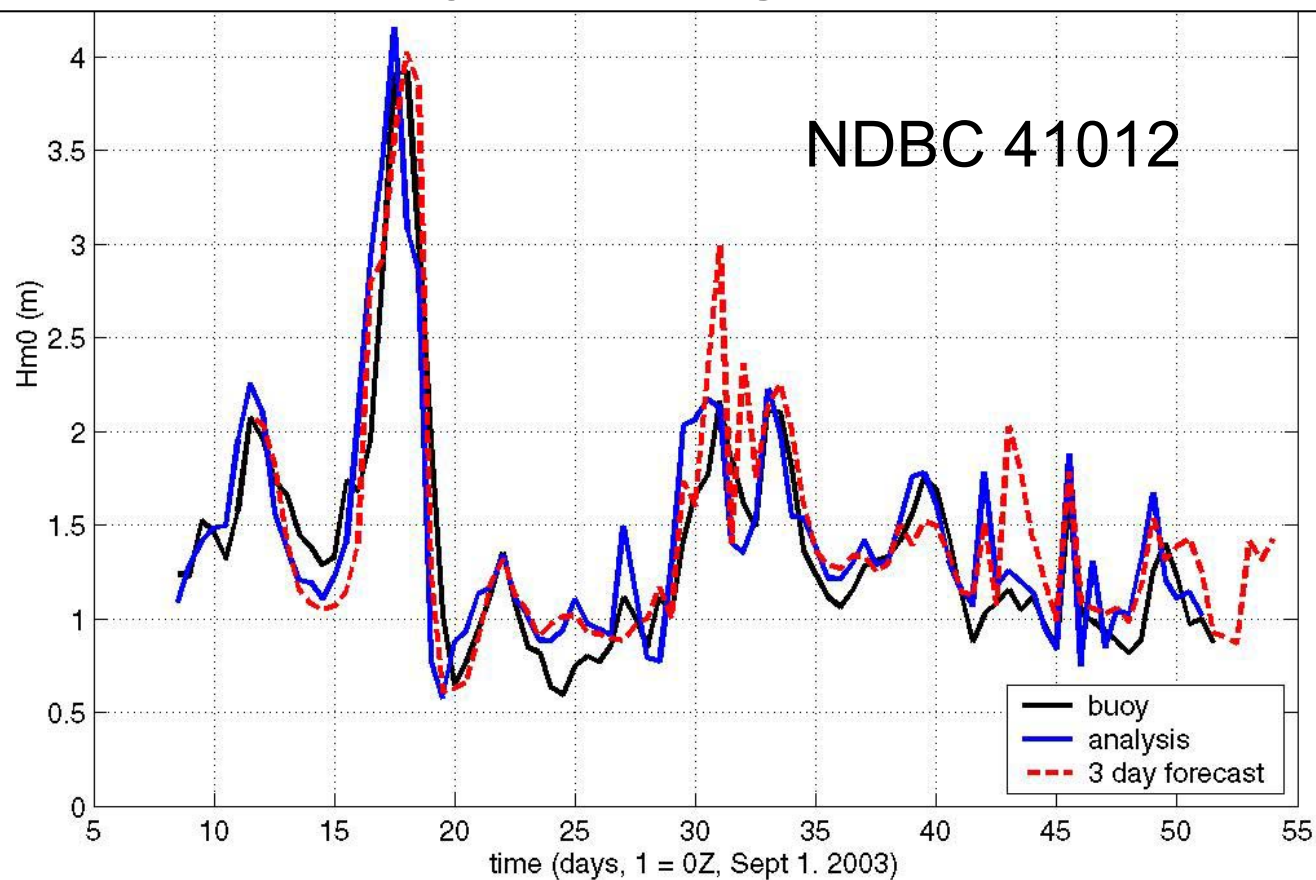


# ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

## ***Northeast Florida Validation***

41012

More validation plots at  
<ftp://ftp7300.nrlssc.navy.mil/pub/rogers/CSI/validation/>





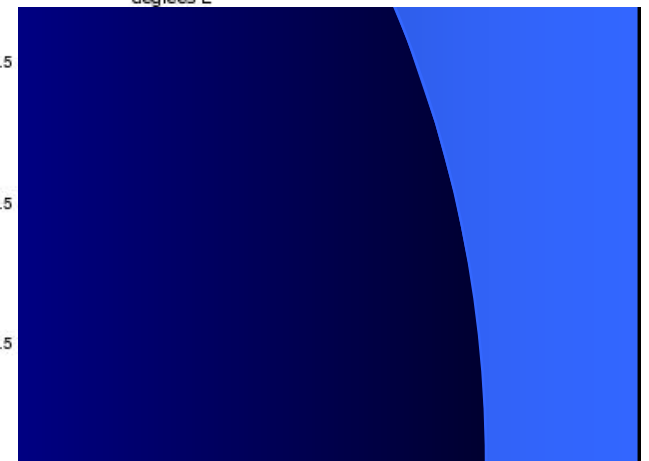
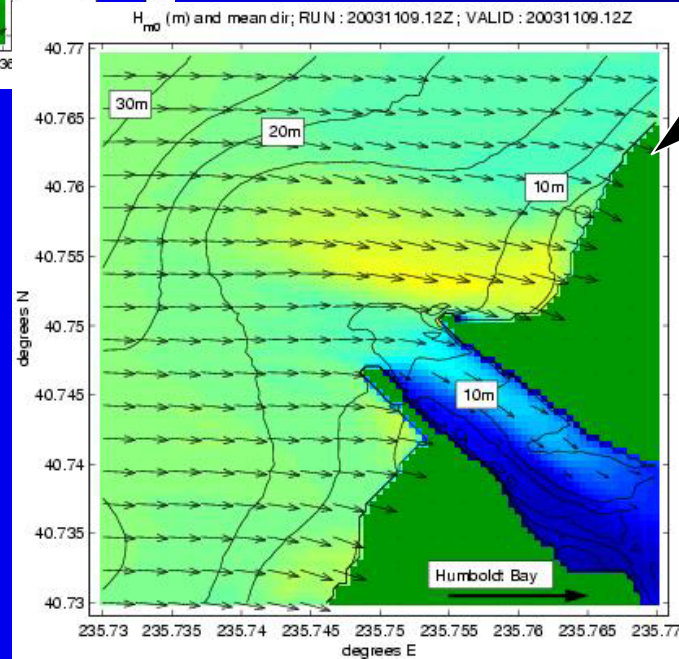
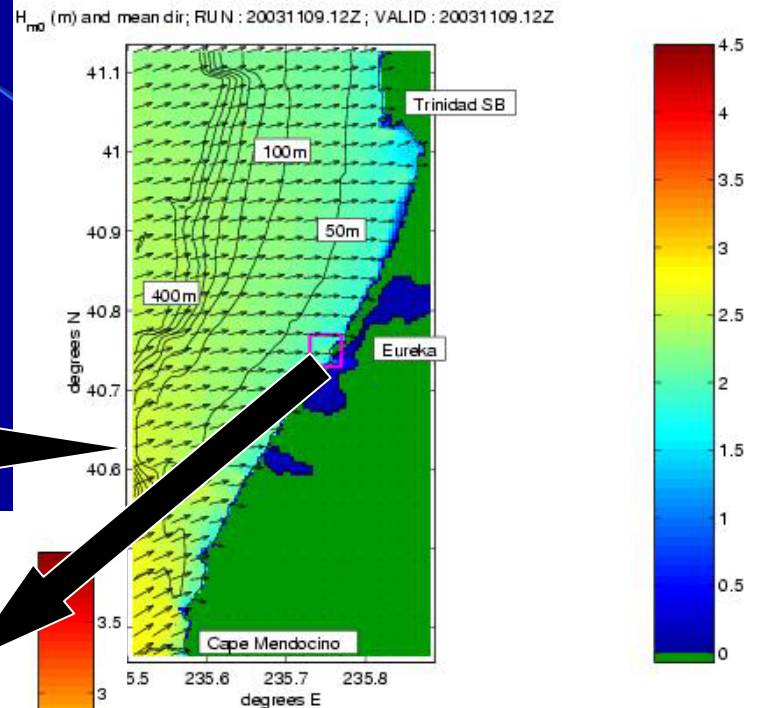
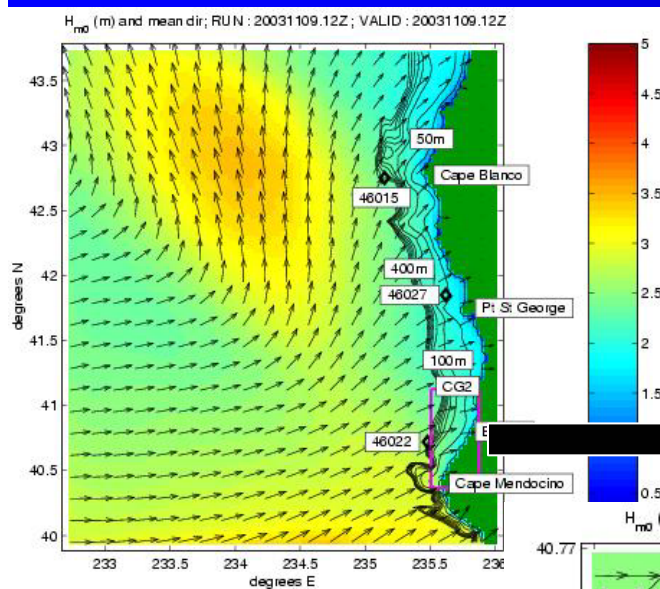
## ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

### **North California (coordinated w/ Eureka office)**

- **Running in realtime on NRL workstation since Aug. 27 2003**
- **Forced by winds from NWS ETA model**
- **Forced by wave spectra from NCEP ENP WW3**
- **Three SWAN grids (innermost=Humboldt Bay channel area)**
- **Forecasts out to 3.5 days**

# Coastal Storms Initiative (CSI) (Sponsor: NOAA)

## North California Forecast System



Nov. 9, 1200Z  
2003

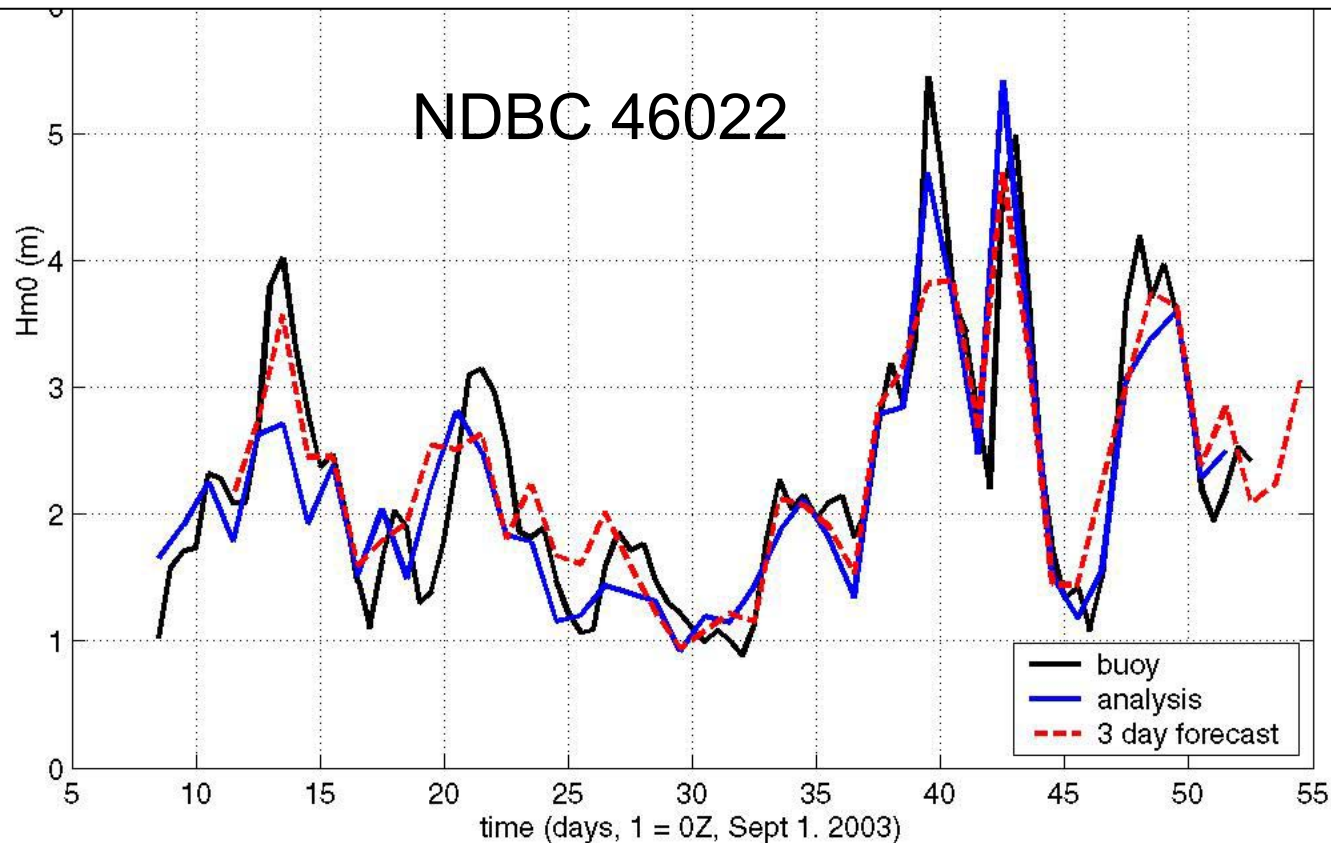
# ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

## ***North California Validation***

46022

More validation plots at

<ftp://ftp7300.nrlssc.navy.mil/pub/rogers/CSI/validation/>



## ***Coastal Storms Initiative (CSI) (Sponsor: NOAA)***

### **FY04 plans**

- **Set up similar forecast system for Washington/Oregon area**
- **Detailed validation**
- **Transitions systems to Eureka WFO**
- **Model improvements**
  - **Include tidal forcing in Humboldt Bay channel SWAN grid**
  - **Resolution improvements via curvilinear coordinates**
  - **Investigate bottom friction effects (tune if needed)**
  - **Other improvements, depending on customer needs**